

SOME SUPERFLUOUS NAMES IN WEST AMERICAN CHITONS

BY G. WILLETT

Probably no group of marine molluscs has suffered more from over-naming than have the chitons. The reason for this is obvious when we consider the great individual variation in many of the species and the difficulty in obtaining some of them in large series. At the time most of the earlier names were bestowed, collections were much fewer and smaller than they are today, in many instances only a specimen or two being available to the describers, resulting in very incomplete diagnosis of many species.

During more than twenty years collecting along the Pacific coast, the writer has made special efforts to accumulate specimens of chitons, and at the present time he has available satisfactory series of many forms that were formerly known only from few and widely scattered examples. He is also indebted to Mr. and Mrs. E. P. Chace and Mr. H. N. Lowe for use of their collections, and to the U. S. National Museum, through Dr. Alexander Wetmore, for photos of some of the types of Carpenter and Dall species.

As a result of study of the above, the following rearrangement of some forms seems necessary. In addition it is believed that further accumulation of pertinent material will result in the relegation to synonymy of several other names in this group.

LEPIDOPLEURUS NEXUS Carpenter, 1864.

Synonyms: *L. heathi* Berry, 1919; *L. ambustus* Dall, 1919.

Examination of more than forty specimens of this chiton from Catalina Island, San Pedro, and Los Coronados, Mexico, and comparison with photos and descriptions of types of the above three supposed species, seem to demonstrate that they all should be united under the oldest name. Neither is there evident a great deal of variation, excepting in age, color, and extent of wear.

LEPIDOCHITONA FLECTENS (Carpenter), 1864.

Synonym: *Dendrochiton semiliratus* Berry, 1927.

At the present time there are in the writer's collection thirty-three specimens of *L. flectens*, eighteen from southeastern Alaska

and fifteen from southern California. Six examples in each lot, examined under a glass, show, to a varying extent, the lirations which were the principal character distinguishing *semiliratus*. Furthermore, the girdle characters show them all to be referable to *Lepidochitona*. *L. heathi* (Pilsbry) appears to be a shore form of *flectens*, the only constant difference between the two being the considerably larger size of the former. In most examples of *flectens*, particularly those from southern California, the pustules on the valves merge into slender riblets running lengthwise of the shell, while in *heathi* this is much less in evidence. Also, all specimens of *flectens* examined by the writer are at least partly red in color, while some examples of *heathi*, from Crescent City, California, in the Chace collection, are without a trace of red, closely approaching *L. raymondi* (Pilsbry) in coloration. That *heathi* and *raymondi* are distinct, however, is indicated by the greater degree of carination in the former, as well as by the somewhat coarser pustulation and more sharply defined lateral areas of *raymondi*.

ISCHNOCHITON DECIPIENS Carpenter, 1892.

Synonym: *Ischnochiton gallina* Berry, 1925.

After examination of a series of more than thirty specimens of this chiton in the Lowe and Willett collections, and comparing them with photos and descriptions, it seems to be clearly demonstrated that the two forms named above are color variations of one species. As to the red color referred to by Dr. Carpenter (MS.) as marking *decipiens*, a series of specimens in the Willett collection grades from red through brown and gray to cream. Until a recent examination of a series of specimens from La Jolla, California, in the Lowe collection, the writer had considered *gallina* to be a well marked species, and had not considered it necessary to compare his San Pedro taken specimens with other members of the group. Mr. Lowe's La Jolla series, however, contains one example typical of *gallina*, and another about midway between *gallina* and *decipiens* (light form), the rest of the lot being typical of the latter. Examination of the sculpture of valves and mantle of *gallina* and *decipiens* shows them to be identical in this regard and it appears conclusive that *gallina* must be considered only a color form of *decipiens*, probably with-

out any particular ecological significance. A conjecture that Carpenter's name *acutior* might also refer to this species is proved incorrect by examination of a photograph of the type kindly furnished by the U. S. National Museum. This shows the riblets on the lateral areas and anterior valve being formed of rather distant tubercles, which is not the case in *decipiens*.

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FERRISSIA IN THE LAKE REGION OF IOWA

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Three species of *Ferrissia* have thus far been recognized in the lake region centering in the Okoboji Lakes and Spirit Lake in northwestern Iowa, namely, *rivularis*, *fusca* and *parallela*.

Of these species *F. rivularis* (Say) has been found only in the Little Sioux and Des Moines Rivers, between which the lakes lie. Here it is found only in moderate numbers, on stones, mussel-shells and (more rarely) on sticks, in rather shallow water.

The remaining two species seem to have been confined to the lakes, though *F. fusca* rarely appeared in the larger kettleholes.

In more than 40 years of periodic field work in this region, the writer has found these two species in notable numbers in but one place, and under such peculiar circumstances that the case seems worthy of record.

All the larger lakes of this region drained into the Little Sioux River, a tributary of the Missouri, and the Okobojis and the Gar Lakes still form a connected system. Prairie Lake, a small lake to the east of the Gar Lakes, drains into the lower part of Lower Gar Lake by a small creek. The lake is rather shallow in the vicinity of the mouth of the creek, and formerly contained large beds of rushes (*Scirpus validus*) in the shallower parts, and also somewhat broken or scattered irregular beds of the yellow pond-lily (*Nymphaea advena*) where the water reached a depth of two or three feet. In some places these beds were somewhat intermingled, but in the main they were rather distinct. It may be of incidental interest to note that during August, in the deeper parts of the rush-beds, the muskrats, formerly very abundant in